

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

ALAN GEORGE,)	
)	Civil Action No. 2:03-cv-1388
Plaintiff,)	
)	Judge Thomas M. Hardiman
v.)	
)	
INGERSOLL-RAND COMPANY,)	
)	
Defendant.)	

OPINION

This products liability action arises from an accident that occurred on August 29, 2001, when Plaintiff Alan George (George) was struck by a falling drill rod as he operated the winch on an RD-20 mobile gas drilling rig (RD-20) manufactured by Defendant Ingersoll-Rand.

George claims that the RD-20 was defective because it lacked overhead protection known as a guard assembly for the winch operator. George further asserts that a guard assembly that was later incorporated into the design of the RD-20 would have protected him from the known danger of falling drill rods.

Defendant Ingersoll-Rand replies that the guard assembly later incorporated into the design of the RD-20 was intended for an entirely different purpose and function, viz., to protect winch operators during the loading process from laterally swinging drill rods. Ingersoll-Rand argues that because it is impossible to “design out” the known hazard of falling drill rods, and because the design of a guard assembly to provide overhead protection for the winch operator from falling drill rods was not feasible, it warned against the hazard of falling pipe by affixing decals on the RD-20 near the winch operator’s control panel. Ingersoll-Rand also argues that its

process – by which workers control the drill rods with a drill string, a rod handling tool and rod loader during the loading or unloading process – is a design that prevents or guards against falling drill rods.

I. Findings of Fact¹

A. The RD-20, Drill Rods and the Drilling Process

The RD-20 at issue was manufactured to customer specifications and sold in 1991 to Kinzer Well Drilling, in Pikesville, Kentucky and was later purchased by George's employer, Dallas-Morris Drilling. The RD-20 is a mobile rig used to drill for natural gas. Holes are drilled by a succession of thirty-foot rods, each of which weighs in excess of five hundred pounds.

The RD-20 does not have a carousel to store multiple drill rods on the rig itself. Thus, each drill rod must be lifted and secured during the loading process and released and lowered during the unloading process. The rods are loaded and unloaded by two workers, one of whom operates the winch while another worker near the rig guides the rods. The drill rod is secured by a "rod handling tool," a one inch round steel pipe the same length as the drill rod, which holds and guides the drill rod as it is lifted by the winch hoist and placed into the rod holder.

The purpose of the rod handling tool is to facilitate the movement of the drill rod from a horizontal position where it is stored to a vertical position in the rod holder of the drill rig. The pin end of the rod handling tool is shaped like a hook with an arrow-end that is manually inserted into one end of the drill rod, while a bracket at the other end of the rod handling tool snaps into an indentation at the other end of the drill rod, securing both ends. There is a lock on the rod

¹ The parties agreed that this cause would be tried non-jury and a bench trial was held May 17-19, 2005.

handling tool that slides up beside the bracket to ensure that the rod remains in place. At approximately forty-eight inch intervals along the length of the tool, there are brackets or guides which also stabilize the drill rod during both the loading and unloading processes.

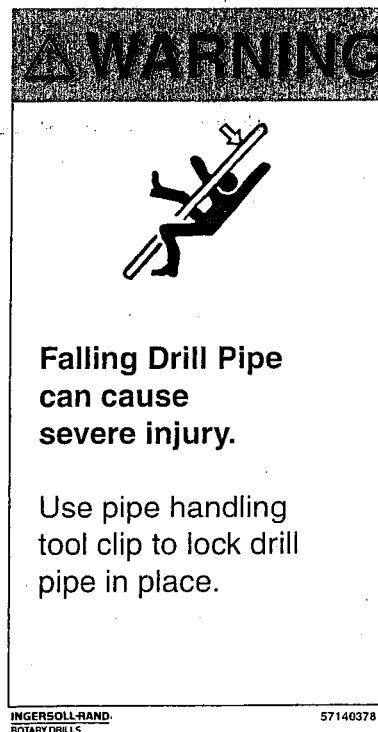
After the drill rod is secured to the rod handling tool, it is attached to a winch hoist, lifted, moved inboard of the derrick, placed in the rod holder and then used to drill into the earth. At the conclusion of the drilling process, the drill rod is extracted from the ground, moved outboard of the derrick by the rod holder, secured to the rod handling tool, lowered by the winch hoist and pulled from a vertical position parallel to the derrick to a horizontal position where it is stored. The manipulation of the winch hoist and the securing of the rod handling tool to the drill rod is performed by the winch operator, who is also known as the drill helper.

The drilling process usually involves three to four individuals actually operating the drill: the drill operator, who is positioned at the drill control panel; the winch operator, who secures the rod handling tool to the drill rod and operates the winch; the "tool pusher," or foreman, who oversees the job; and a "puller" who "runs the pipe," manually pulling the drill rod ends and aligning them on the trailer.

Despite the foregoing precautions, falling drill rods are a known hazard in the industry. Tom Geer (Geer), who was the drill operator for Dallas-Morris Drilling on the night in question, testified that in his ten years in the gas drilling industry, he worked exclusively on Ingersoll-Rand RD-20's. He had seen drill rods fall during the unloading process on several occasions prior to the George incident and on at least three or four occasions since then. These incidents all involved the Ingersoll-Rand RD-20 and drill rods made of the same material and measuring the same length as those used on the day George was injured.

In addition, Randy Wile, who was the tool pusher and supervisor of George's rig, has seen drill rods fall on several occasions. Wile worked in the gas drilling industry from 1976 to 2002, including working exclusively on RD-20s from 1989 to 2002 for Dallas-Morris Drilling. Wile has seen drill rods fall on six occasions when he was on site, including twice when he was the winch operator. He avoided injury on those occasions by abandoning the winch operator's platform and running out of the way of the falling drill rods.

There is no question that Ingersoll-Rand was aware that falling drill rods are a known hazard in the gas drilling industry. Attached at the winch operator's station on every RD-20 rig is the following decal:



B. Plaintiff's Accident

On August 29, 2001, George began work as the winch operator of the RD-20 at 7:00 p.m.² The accident occurred during the eleventh hour of a twelve hour shift. For the first three hours of the shift, George and drill operator Geer performed the drilling process themselves because the rig hand scheduled to work that evening did not appear for work. Geer and George successfully loaded thirty to forty drill rods despite using a brand new rod handling tool that did not fit properly onto the drill rods.³ Although George mentioned the problem to Geer, they continued to use the new tool.

Hours later, after George and Geer had finished the loading and drilling process, Bruce Dashner (Dashner) arrived. Because Dashner had never acted as a rig hand before that night, George instructed him regarding how to unload the drill rods. The crew successfully unloaded approximately thirty drill rods onto a flatbed trailer without incident. The accident occurred as the crew began to unload the first drill rod onto the second flatbed trailer. As George was using the winch controls to lift the rod handling tool to clamp it onto the drill rod, he saw the pin enter the drill rod. He then raised the rod handling tool and secured the c-clip onto the bottom of the drill rod. George then lifted the tool and the drill rod out of the bottom of the carousel and swung the top of the drill rod and tool out of the carousel. George observed the top of the tool and the drill rod as he lifted them out of the carousel. He then pushed the bottom of the drill rod and tool to Dashner, who was on the flatbed trailer.

² The parties stipulated that the winch controls of the subject RD-20 were in the same condition at the time of Plaintiff's accident as at the time of original sale.

³ The drill rods used on the RD-20 at issue were stored on a flatbed trailer parked near the rig. The process of loading and unloading drill rods can also be accomplished by transferring them from the ground or a tub.

The trailer was parked two or three feet directly behind the RD-20. Dashner grabbed the tool and the attached drill rod and began pulling them toward the trailer. Once the drill rod and tool cleared the trailer, George began to let the rod down with the winch controls. The bottom of the rod made contact with the trailer about six feet from the end closest to the drill rig. George continued to release the winch after the drill rod and tool contacted the trailer, at which time the top of the drill rod came loose and it fell straight towards him while the bottom of the pipe rested on the trailer.

As the drill rod was falling, George was standing at the winch controls facing towards the trailer with his arm raised up over and in front of his head. The drill rod struck George in the face while he was standing on the winch operator's station and knocked him off of the platform onto the ground below.

Tom Geer was operating the drill at the time of the accident. As the drill rod fell, Geer saw George with his arm up as though he was trying to catch something and then he saw the drill rod take George from the platform to the ground. After Geer ensured that the power head was not moving on the drill, he ran around the trailer to where George was laying on the ground.

C. The Guard Assembly

There was no guard assembly over the winch operator's station on the RD-20 at which Alan George worked on August 29, 2001. However, several months after the subject RD-20 was manufactured, Ingersoll-Rand began supplying a triangular steel tube that fit over the winch operator's station with every new RD-20 that was sold. Ingersoll-Rand referred to this new part as a guard assembly, but workers in the field called it a "headache rack."

Ingersoll-Rand did not design the guard assembly. It was originally fabricated by an Ingersoll-Rand customer, Leo Kay Drilling, for use on its RD-20 drill rig. Upon observing the guard assembly in the field, Ingersoll-Rand engineers manufactured an identical one and provided it as standard equipment on all RD-20s by late 1991, at which time the guard assembly cost \$163.02 to manufacture.

The guard assembly is a horizontal bar with a diagonal support constructed of four foot by four foot square steel tubing with a quarter inch wall thickness that attaches to the mast of the drill rig. When attached, the guard assembly is located above the winch operator and extends across the entire width of the winch operator's platform. The Ingersoll-Rand's guard assembly is removable to facilitate travel of the RD-20 from site to site and does not interfere with its operation in any way.

II. Analysis

Although he initially alleged negligence and breach of warranty, George proceeded to trial only on his strict liability defective design claim. Because this is a diversity case, Pennsylvania products liability law applies. *Padillas v. Stork-Gamco, Inc.*, 186 F.3d 412, 413 (3d Cir. 1999).

Some forty years ago the Pennsylvania Supreme Court adopted §402A of the Restatement (Second) of Torts to govern strict product liability claims. *Webb v. Zern*, 220 A.2d 853, 854 (Pa. 1966). The Pennsylvania Supreme Court has stated that "products are to be evaluated at the time of distribution when examining a claim of product defect." *Duchess v. Langston Corp.*, 769 A.2d 1131, 1142 (Pa. 2001). A product is deemed defective under Pennsylvania law if it "left the

supplier's control lacking any element necessary to make it safe for its intended use.” *Lewis v. Coffing Hoist Div., Duff-Norton Co.*, 528 A.2d 590, 593 (Pa. 1987) (quoting *Azzarello v. Black Bros. Co.*, 391 A.2d 1020, 1027 (Pa. 1978)). A seller may be strictly liable for injury caused by a product’s defective condition even if he exercised all reasonable care in its design, manufacture, and distribution. *Berkebile v. Brantly Helicopter Corp.*, 337 A.2d 893, 898 (Pa. 1975); *Webb*, 220 A.2d at 854 (Pa. 1966), adopting § 402A Restatement (Second) of Torts (1965).

A. Azzarello Threshold Determination

In *Azzarello*, the Pennsylvania Supreme Court established a two-step test for courts to evaluate whether a product is defective. *Id.*, 391 A.2d 1020 (Pa. 1978); *Griggs v. BIC*, 981 F.2d 1429, 1432 (3d Cir. 1992). At the first step, the trial judge must make a threshold legal determination whether the defect alleged, if proven, would render the product “unreasonably dangerous” as the term is defined in the Restatement (Second) of Torts § 402A. *Azzarello*, 391 A.2d at 1026. “It is a judicial function to decide whether, under plaintiff’s averment of the facts, recovery would be justified;” and only after this judicial determination is made is the factfinder to determine whether the facts of the case support the averments of the complaint. *Id.* As the Court of Appeals for the Third Circuit recently explained:

Pennsylvania’s approach is reflected in the fact that risk-utility analysis concerning whether a product is unreasonably dangerous (which is required under § 402A of the Restatement (Second) of Torts) is performed by the trial judge rather than the jury. In answering this question a court is essentially making a social policy determination and acting as both a social philosopher and a risk-utility economic analyst.

Forrest v. Beloit Corp., ____ F.3d ____, 2005 WL 2245640, *10 (3d Cir. Sept. 16, 2005)

(internal citations and quotations omitted).

The threshold decision concerning whether a product is defective as a matter of law can be difficult to make. *Nowak*, 32 F.3d at 758. Several factors must be considered: (1) the usefulness and desirability of the product – its utility to the user and to the public as a whole; (2) the safety aspects of the product – the likelihood that it will cause injury, and the probable seriousness of the injury; (3) the availability of a substitute product which would meet the same need and not be as unsafe; (4) the manufacturer's ability to eliminate the unsafe character of the product without impairing its usefulness or making it too expensive to maintain its utility; (5) the user's ability to avoid danger by the exercise of care in the use of the product; (6) the user's anticipated awareness of the dangers inherent in the product and their avoidability, because of general public knowledge of the obvious condition of the product, or of the existence of suitable warnings or instruction; and (7) the feasibility, on the part of the manufacturer, of spreading the loss by setting the price of the product or carrying liability insurance. *Surace v. Caterpillar, Inc.*, 111 F.3d 1039, 1046-47 (3d Cir. 1997) (citing *Dambacher v. Mallis*, 485 A.2d 408, 423 n.5 (Pa. Super. Ct. 1985)). In considering these factors, the Court must balance “the utility of the product against the seriousness and likelihood of the injury and the availability of precautions that, though not foolproof, might prevent the injury.” *Surace*, 111 F.3d 1049-50.

The RD-20 is, of course, useful and desirable. Moreover, the Court is unaware of a substitute product that would meet the same need in the gas drilling industry. However, as noted previously, falling drill rods are a known hazard in the drilling business. Thus, it was foreseeable to Ingersoll-Rand and other manufacturers of drilling equipment that falling drill rods could cause death or serious bodily injury to the winch operator. This is demonstrated by the fact that Ingersoll-Rand warned against this specific danger.

At the time the RD-20 was first designed and built, Ingersoll-Rand did not design any overhead protection for the winch operator to guard against the hazard of falling drill rods. Relatively soon after production of the subject RD-20, Ingersoll-Rand sold the guard assembly to provide protection to the winch operator from laterally swinging pipe. The fact that Ingersoll-Rand now includes guard assemblies with all RD-20s indicates that it has eliminated at least part of the danger inherent in loading and unloading thirty foot drill rods weighing over five hundred pounds. It is also clear that the guard assembly does not impair the RD-20's utility and is inexpensive to manufacture. The other factors appear either to be neutral or favor George in the risk-utility balance. In sum, the RD-20 at issue in this case is useful and desirable, but brings with it the known risk of serious bodily injury as a result of falling drill rods. Thus, the question presented is whether the guard assembly is a "precaution that, though not foolproof," *Surace*, 111 F.3d 1049-50, would have prevented George's injuries.

B. Absence of a Guard Assembly as a Defect

Under the design hierarchy, which both parties recognized as an accepted principle of engineering safety, there are three steps to safe design: (1) once a hazard is identified, design the product to eliminate the hazard; (2) if it is not feasible to eliminate the hazard, then guard against the hazard; and (3) if the hazard cannot be guarded against, then warn against the hazard. *See, e.g., Wagner v. Hesston Corp.*, No. Civ. 03-4244, 2005 WL 1540135, *3 (D. Minn. June 30, 2005). The three steps of the design hierarchy are in order of priority, so a warning is used only if it is not possible to eliminate the danger or guard against it. The parties agreed that the risk of falling drill rods cannot be completely eliminated or "designed out." The Court must therefore determine whether it was feasible for Ingersoll-Rand to guard against this hazard.

Under Rule 704 of the Federal Rules of Evidence an expert witness may offer testimony concerning the ultimate issue in the case. *See Forrest v. Beloit Corp.*, ____ F.3d ____, 2005 WL 2245640, *7 (3d Cir. Sept. 16, 2005) (citing *Salas v. Wang*, 846 F.2d 897, 905 (3d Cir. 1988)). The admissibility of expert opinion testimony with respect to such issues is well established. *Id.* (citing *Wilburn v. Maritrans GP, Inc.*, 139 F.3d 350, 356 (3d Cir.1998)).

Plaintiff's expert, James Muto (Muto), was qualified to offer expert testimony in the field of mechanical engineering and heavy industrial equipment design and safety. Muto has specific experience in designing overhead protective devices for drilling equipment used in the mining industry. He examined an RD-20 like the one upon which George was working, he observed a crew load and unload sections of drill rods, and examined and took measurements of the guard assembly. Muto concluded that, had a guard assembly been present on the RD-20 at issue, the falling drill rod would have struck the guard assembly and bounced off it, thereby preventing Alan George's injuries.

Although the Court found some of Muto's testimony unpersuasive, the crux of his opinion was supported by testimony from lay witnesses who have seen the guard assembly on the RD-20 protect the winch operator from falling drill rods. Where a plaintiff attempts to introduce evidence of other accidents as direct proof of a design defect, the evidence is admissible only if the proponent demonstrates that the accidents occurred under circumstances substantially similar to those at issue in the case at bar. *See Barker v. Deere and Co.*, 60 F.3d 158 (3d Cir. 1995). "This foundational requirement of establishing substantial similarity is especially important in cases where the evidence is proffered to show the existence of a design defect . . . In such cases,

the factfinder is invited to infer from the presence of other accidents that a design defect existed which contributed to the plaintiffs' injuries." *Id.* at 162-63. *See also C.A. Associates v. Dow Chemical Co.*, 918 F.2d 1485, 1489 (10th Cir. 1990) ("occurrence of similar accidents or failures involving the same product holds great relevance, since evidence of such failures tends to make the existence of a defect more probable than it would be without the evidence").

Tom Geer has worked on an RD-20 as either a driller, a winch operator or a rig hand for about eleven years. Geer is not a personal friend of Alan George and had not seen him since the accident until he was called to testify at trial. He personally observed a drill rod fall onto a guard assembly on an RD-20 three or four times. On one occasion, Geer saw a drill rod made of the same material and measuring the same length as the one that struck Alan George fall toward a winch operator named Robert Harris. The drill rod fell from the same distance as the one that struck George. In that case, the drill rod struck the top of the guard assembly and bounced off, protecting Robert Harris from injury. Tom Geer saw drill rods fall and strike the guard assembly on other occasions as well. Significantly, in each case the guard assembly remained intact, the brackets holding the guard assembly remained intact and the winch operator was protected from harm by the guard assembly. The Court found Geer's testimony credible in its entirety.

Randy Wile (Wile) was the tool pusher for the RD-20 at issue and has years of experience working on RD-20's. Wile testified that he was on site on one occasion when a drill rod fell against the guard assembly. On that occasion, the bottom third of the rod struck the "headache rack" and the balance of the rod went over the top of the guard, thereby protecting the winch operator. The guard assembly did not collapse and the brackets holding the rack did not bend. In that instance, the drill rod bounced off the guard assembly and fell to the side, protecting the

winch operator from injury. Like Geer, the Court found Wile's testimony entirely credible.

Defendant's expert, William Otto (Otto), is an aerospace engineer with a distinguished academic and work history. Otto has testified as an expert witness at trial in several hundred cases and was offered in this case as an expert in accident reconstruction and physics. As an initial matter, Otto opined at trial that, because it did not appear that the drill rod struck the RD-20, Alan George was not standing by the winch controls when he was struck by the falling pipe. The Court finds Otto's testimony on this point unpersuasive as it is contradicted by the credible testimony of George and Geer, who both testified that George was standing on the winch operator's platform when he was struck by the falling drill rod.

Second, whether or not Alan George properly engaged the pilot of the rod handling tool into the pin end of the drill rod during the unloading process is entirely irrelevant to the issue of whether the RD-20 was defectively designed. "An individual plaintiff's failure to exercise care in the use of a product is not relevant to whether the product is unreasonably dangerous in the first place." *Surace*, 111 F.3d at 1050 (citing *Fleck v. KDI Sylvan Pools Inc.*, 981 F.2d 107, 119 (3d Cir. 1992) ("product liability laws . . . encourage manufacturers to make safe products even for the careless and unreasonable consumer"); *Berkebile*, 337 A.2d at 899 n.6, 902 (rejecting even the "reasonable" consumer standard for the "ordinary" consumer)). The Court admitted Mr. Otto's testimony regarding George's potential error in securing the rod handling tool to the drill rod because it formed the basis for his expert opinion regarding the angles and/or trajectory of the falling rod. Evidence of George's failure to properly insert the pilot into the drill rod is otherwise irrelevant because it improperly introduces concepts of negligence into a strict liability case. *Surace*, 111 F.3d at 1050-51.

Third, Otto opined that the guard assembly would not have protected George because it could not withstand the force of a falling drill rod. Otto did not offer any evidence of demonstrations, tests or experiments to determine how much force the guard assembly could withstand. The Court finds Otto's theories unpersuasive because he offered no evidence that the guard assembly had collapsed either in the field or in tests. Moreover, his opinion contradicted the real-life experiences of Geer and Wile, both of whom testified credibly that the guard assembly protected the winch operator from falling drill rods on several occasions. Not only did Ingersoll-Rand fail to conduct any tests involving drill rods falling on the guard assembly, it could not cite a single incident from any source, either in the field or under test conditions, in which a falling drill rod caused the assembly guard to collapse.

Fourth, and perhaps most significantly, Otto admitted that in some circumstances the guard assembly *would* provide protection to the winch operator. He testified to a reasonable degree of scientific certainty that it is feasible and practical to design a device that would protect the winch operator from falling drill rods by deflecting the rod to the side of the rig. Although he opined that the guard assembly as presently constituted would not protect the winch operator, Otto admitted that the current guard assembly could be made stronger by changing the length of the angles that the rack slid into, changing the physical size of the guard and the brackets, or using higher grades of plate that have more strength, making it feasible for Ingersoll-Rand to provide overhead protection for the winch operator on the RD-20. Thus, even assuming, *arguendo*, that the guard assembly that now is standard on the RD-20 would not have protected George from the falling drill rod, Ingersoll-Rand's own expert conceded at trial that a strengthened guard assembly is feasible. Accordingly, the absence of such a guard in light of the

manifest danger of falling drill rods renders the RD-20 at issue defective. *See, e.g., Putt v. Yates-American Mach. Co.*, 722 A.2d 217, 221 (Pa. Super. Ct. 1998), *appeal denied*, 737 A.2d 743 (Pa. 1999).

The Court is convinced by a preponderance of the evidence that it was feasible for Ingersoll-Rand to provide a guard assembly that would withstand the weight of the falling drill rod that injured George and protect the winch operator from harm. The only evidence submitted by the Defendant that the guard assembly at issue could not withstand the weight of the falling drill rod was through the opinion of its expert, which is contradicted by the actual experiences of Tom Geer and Randy Wile. Their testimony supports James Muto's conclusion that it was feasible for Ingersoll-Rand at the time it designed and sold the RD-20 to provide overhead protection for the winch operator in the form of the guard assembly that it later sold with every RD-20. Accordingly, the Court concludes that the RD-20 on which Alan George was injured was defective because it lacked any protection for the winch operator from the known hazard of falling drill rods.

Lastly, "the question of whether the presence of a guard would have prevented [George's] injury is a question of fact, and is distinct from the ultimate issue of whether the [RD-20] was defectively or negligently designed and manufactured." *Forrest v. Beloit Corp.*, ____ F.3d ____, 2005 WL 2245640, *7 (3d Cir. Sept. 16, 2005). To establish a claim under the strict liability doctrine, a plaintiff must prove that the product defect proximately caused his injuries. *Surace v. Caterpillar, Inc.*, 111 F.3d 1039, 1044 (3d Cir. 1997) (citing *Berkebile v. Brantly Helicopter Corp.*, 337 A.3d 893, 898 (Pa. 1975)). The plaintiff need not show that the product's design defect was the sole cause of injury; a design defect may be a proximate cause of injury

concurrently and in combination with other causes. To be sufficient, the plaintiff's evidence must show that the defective design of the defendant's product was a "substantial factor" in the cause of injury. *Spino v. John S. Tilley Ladder Co.*, 696 A.2d 1169, 1172 (Pa. 1997).

George's injuries were caused by direct, blunt force delivered by a thirty foot pipe weighing over five hundred pounds. Defendant's expert admitted that it was feasible and practical from an engineering perspective for Ingersoll-Rand to design a protective device over the winch operator's platform to deflect falling drill rods. As a factual matter, the Court is convinced that a preponderance of the evidence presented at trial demonstrated that had the guard assembly that has been standard on the RD-20 since 1991 been in place at the time of the accident, George would not have been injured. *See Forrest v. Beloit Corp.*, ___ F.3d ___, 2005 WL 2245640, *7 (3d Cir. Sept. 16, 2005). Moreover, even had the standard guard been too weak to protect George, the Court finds that it was feasible for Ingersoll-Rand to design a stronger guard that would have prevented his injuries. Therefore, the absence of a protective guard on the RD-20 was a legal cause of Alan George's injuries.

III. Damages

After being struck by the drill rod, Alan George woke up on the ground beside the RD-20 drill rig. While on the ground, he had severe pain in his head, face, left shoulder and right ankle. He testified credibly that he was cold and shaking, everything was blurry, and he felt as if he was going into shock. He managed to crawl up onto the winch operator's station but had to wait in extreme pain for what seemed to him like days before the ambulance arrived. George was taken from the site by ambulance to Punxsutawney Hospital. Because his condition was too severe to

allow him to be treated there, however, George was driven by ambulance to DuBois Airport and life-flighted to Allegheny General Hospital in Pittsburgh. He remained in Allegheny General Hospital from August 29 until September 4, 2001.

George underwent two operations during his initial stay at Allegheny General Hospital. The day after his admission, two plates and four screws were inserted into his ankle because of a fracture that displaced his fibula. The next day, three plates were inserted into his left cheek bone through the inside of his mouth. George sustained fractures around his eye and face, including a blow-out fracture of the left orbit around his eye extending into his sinuses and his left cheek. Surgery on George's face was performed by Dr. Celin, who pulled the pieces of bone in Mr. George's face together and anchored them with screws and plates. This surgery was successful and the three plates and screws will remain in George's face permanently. George also sustained a fracture to his left scapula. The scapula fracture was treated conservatively by placing it in a sling and allowing it to heal on its own. He also sustained injuries to his head and bleeding around his brain. His closed head injury, although fairly serious, has no long term consequences. In addition, George's teeth were broken and his head and face swelled up significantly while he was at the hospital.

During his stay at Allegheny General Hospital, George could not get out of bed, chew his food, bathe himself, go to the bathroom, or walk. He had a catheter and was in such pain at the hospital that he required pain medication and could not begin therapy. George's ankle was immobilized in a walker for six to eight weeks, and his shoulder was immobilized in a sling. George went from the hospital to his girlfriend's home after the accident and stayed there to convalesce for about six to eight weeks. While there, George was immobilized on the couch

because his shoulder was in a sling and his ankle was in a walker. He was depressed because he could not do anything but lie on the couch and watch television and he needed help even to go to the bathroom or eat. During the six to eight weeks he was at his girlfriend's home, George testified that he was in as much pain as when he was in the hospital. The Court finds this testimony exaggerated, however. When George initially went to his girlfriend's home, one would expect that he was in as much pain as when he was in the hospital. However, the Court finds that during his convalescence, George's condition improved steadily, resulting in a concomitant reduction in pain over time.

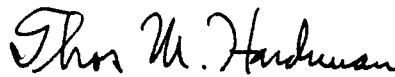
Based on the evidence presented at trial, the Court is persuaded that George has fully recovered from his injuries resulting from the accident. The Court found the testimony of Defendant's witness, Jon Tucker, M.D., particularly persuasive on this issue. By the end of November 2001 – about three months after the accident – George was medically cleared to perform light duty work. Even more significant in light of George's past work history, within ten months of the accident, he was fully recovered and able to perform heavy manual labor.

In the six years prior to working at Dallas-Morris, George held over eleven jobs. In the five months that he worked at Dallas-Morris, George never worked more than twenty hours of overtime and worked twenty hours of overtime only once. In fact, in the five months that he worked at Dallas-Morris, George usually did not work a full forty hour week. The Court calculates George's average monthly wage to be \$1,537.50. Mr. Kulman, Plaintiff's vocational rehabilitation expert, did not review many of George's pertinent medical records. Even worse, during his vocational examination, George did not tell Mr. Kulman that his doctors had released him to perform moderate duty work.

The parties stipulated at trial that the total cost of George's medical treatment was \$96,177.09. The Court finds that Alan George suffered lost earnings from September 2001 through and including June 2002, which amounts to \$15,375 (\$1,537.50 x 10 months). The Court finds that George suffered no economic harm after he was cleared to return to work at the end of June 2002. Finally, because of the nature and severity of his injuries, the Court will award George \$200,000 for pain and suffering. Accordingly, judgment shall be entered in favor of Alan George and against Ingersoll-Rand Corporation in the total amount of \$311,552.09.

An appropriate judgment order follows.

BY THE COURT:

A handwritten signature in cursive script, reading "Thomas M. Hardiman".

Thomas M. Hardiman
United States District Judge

Dated: October 13th, 2005

cc: All counsel of record